25X1

[redacted]

SECOND MONTHLY NARRATIVE REPORT

15 September 1965

REFERENCE

25X1 [redacted]

25X1 [redacted] Job No. 645

REPORTING INTERVAL

10 August 1965 - 10 September 1965

OBJECTIVE

The objectives of this program are to define the operational objectives for automatic screening of photographic intelligence data; to study, test and evaluate the techniques applicable to the problem; and to generate a design for an operational prototype system. Extensive experimentation on existing scanning and processing equipment, coupled with computer simulations of recognition systems, will be used to test the feasibility of several schemes. The final system design will be based upon the results of the techniques study and the operational objectives defined in the program.

STATUS OF ACTIVITIES AND ACCOMPLISHMENTS

During the month, the definition of the operations required of a device to accomplish automatic screening of photographic intelligence was added to the first task. Emphasis was placed on postulating situations and operating modes for the study. The modes

being considered are screening, flash - immediate, and detail, all of which represent differing time and level-of-detail requirements.

Research was continued on the study of available techniques and the hardware implementations of the techniques singularly and in combination. In particular, special emphasis was placed on determining potential applications of the Westinghouse image-dissector pick-up camera tube.

The interchange of resistors and diodes in the sample gates has been completed. This change will improve the signal levels available at the filter outputs. The mechanical modification to secure the rotating mirror with a positive clamp has been completed. With the completion of these modifications and the subsequent realignment of the optics, the testing program will resume.

Modifications of the prenormalizing system are continuing to eliminate the dependency of the system upon CONFLEX for control and output. These include the incorporation of a punched paper tape output to record D-cell values and an M-sequence generator to sample the filter values both randomly and singularly.

Work has begun on task four, the preliminary design of the entire system. However, the final design will depend upon the research to be conducted under task two and the operational objectives defined under task one.

DIFFICULTIES ENCOUNTERED

None

TECHNICAL AGREEMENTS MADE

None

PROGRAM FOR THE NEXT INTERVAL

During the next reporting period, emphasis will be placed on designing and conducting experiments with the prenormalizer to furnish information for the final report on [redacted] 25X1 Current experiments with the prenormalizer are dependent on the CONFLEX and will have to be discontinued in about one month when the CONFLEX is sent to Wright-Patterson AFB. Emphasis is also to be placed on completing the preliminary design of the complete system and defining the operational objectives for it. The modes of operation in postulated situations will determine the operating techniques and level of detail to be processed.

25X1 SPECIAL REPORT - [redacted]

The CONFLEX System is back in operation. We anticipate delivering a final report between five and seven weeks from this date.

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